University Department of Commerce & Business Management

Ranchi University, Ranchi

A Synopsis for Ph.D Registration

On the Topic

Adoption of Financial Technology (Fin-Tech) in Banking Sector- A Case Study of State Bank of India & HDFC Bank in Ranchi District

Guided & Supervised by:-

Dr. Anirban Gupta

Assistant Professor

Department of Commerce St. Xavier's College, Ranchi

Submitted by :-

Megha Kumari

UGC NET Qualified

Research Scholar

1. INTRODUCTION

The word 'fin-tech' is derived from two words 'finance' and 'technology'. It is a new technology that improves and automate the financial services. Dee Hock is known as a father of fin-tech. fin-tech uses technology to enhance financial services and product, and deliver services to customer in the area of banking, insurance, investing- anything which is related to finance. Fin-tech is used by companies, business owner and consumer so that they can manage their financial operations more betters. Companies which work in the field of financial inclusion use fin-tech to cut down their operation costs. Since the internet revolution, financial technology has grown rapidly.

Most fin-tech were launched after 2000, have raised funding since 2010 and have not yet reached maturity. They make it not only possible but also easy to move money between accounts, people, countries and organizations. Fin-techs include start-ups, growth companies, banks, nonbank financial institutions, even cross-sector firms.

1.1 History of Fin-tech :

Fin-tech 1.0(1865-1967) is about infrastructure: this era started when people start talking about financial globalization. For the first time in history rapid transmission of financial information across world with the technology such as telegraph, railroads and steamship. The key events on this timeline include first transatlantic cable (1866) and Fedwire in the USA (1918), the first electronic fund transfer system. In 1950's credit card is introduced that erase the burden of carrying cash.

Fin-tech 2.0 (1967-2008) is about bank: this period mark the shift from traditional to digital and is led by traditional financial institutions. First handled calculator and the first ATM installed by Barclays bank that marked the beginning of the modern period of the fin-tech in 1967. In 1970 the first digital stock exchange NASDAQ was established. In 1973 SWIFT (Society for Worldwide Interbank financial telecommunication) was established. The 1980s saw the rise of bank mainframe computers and the world is introduced to online banking. By the beginning of the 21st century banks internal processes, interaction with outsiders and retail customers had become fully digitized. This era end with the Global financial crisis in 2008.

Fin-tech 3.0 (2008-2014) is about startup: this era started with global crisis which soon changed into general crisis. The general public developed mistrust in the traditional banking system. This era soon become a startup era. Adoption of smartphone become the primary means by which people use the internet and other financial services. In year 2011 Google introduced Google wallet and in year 2014 Apple Inc. introduced Apple pay.

Fin-tech 3.5(2014-2017) is about globalization:- this era mainly focuses on the expansion of digital banking around the world, with the development of fin-tech technology. This era focuses on the customer and how they are using the internet.

Fin-tech 4.0 (2018-today) is about disruptive technology:- block chain technology and open banking are continuing to drive the innovation of the future of financial services. The game changes here neo banks that challenge the pricing and complexity of traditional banks, while earning customer's trust through digital only.[1]

1.2 Types of fin-tech

- Banking: fin-tech make banking more accessible and convenient for their customer by providing online banking (e- banking).

- Lending: make lending more flexible and accessible by providing peer-to-peer lending and credit scoring models.

- Payment: fin-tech makes payment more secure and convenient for customer through digital wallets and other payment services.

- Wealth management: fin-tech help financial advisor and wealth management platform grow assets under management.

- Investment and Trading: with the help of fin-tech buying and selling of stocks, bonds and crypto currencies become easier.

- Insurance: fin-tech has made it easier to purchase and manage insurance policies.

- Crowd funding : fin-tech made it easier for business and entrepreneur to raise fund by pooling resources from individual investors.

- Crypto currency: fin-tech has made it easier to access digital crypto currency markets and send and accept crypto money.

1.3 Fin-tech in Banking Sectors:

Adoption of fin-tech in banking sector change the way banks were conduct their business that is from offline to online service, which has improved banks operating efficiency and service quality[2]**.** fin-tech improve banks work in many ways they provide better service quality to their customers. Improve security, enhance customer experience, provide faster service, transparency and improve accessibility.

Fin-tech create new opportunities for banks that make them more competitive and efficient when it come to delivering finance and banking services. They can leverage digital technology to save time and minimize the burden on the banking staff. Fin-tech companies are offering mobile payment services that enable customers to make payments in a few taps on smartphones. So, they don't have to carry cash or debit/ credit cards.

E-banking (also known as online banking) is also considered a part of fin-tech because it provide use of technology to deliver banking services digitally. Fin-tech is a broader and E-banking is a core element. Online banking provide easy and accessible services to their customer like online transfer of funds from one bank account to another bank account. Online banking is time saving for their customer it provide transparency and check their balance online without visiting bank branch.

In the Indian banking sector, fin-tech encompasses digital payments, mobile banking, digital wallets, peer-to-peer lending, asset management and neo banks all leveraging technology to enhance financial services and accessibility**.**[3]

1.4 Types of fin-tech in banking sector :

A. **Digital Payments & Wallets**:

- Digital wallets: platforms like paytm and phonepe allows users to make digital payments, transfer funds, and manage finance through mobile apps.
- UPI(Unified Payment Interface): A real time payments system that facilitates instant fund transfers between bank accounts.
- QR Code Payment: Enabling contactless payments through scanning QR codes .

B. **Mobile banking & Neo banks:**

- Mobile Banking Apps: Banks offer mobile apps for customer to access their accounts, make transactions, and manage finance on the go.
- Neo banks: Mobile only banks that offer a digital- first banking experience, often with a focus on user friendly interfaces and innovative features.

C. **Lending Services:**

- Peer-to-peer (P2P) lending: Platforms connect individual borrowers with lenders, offering an alternative to traditional banking for loans.
- Digital lending: Banks and fin-tech companies offer online loan products, such as personal loans, business loans and credit cards, through digital channels.

D. **Asset Management & Investment Platforms;**

- Robo –Advisors: Algorithmic platforms that provide automated investment advice and portfolio management
- Online Brokerage Platforms : Platform like Zerodha enable investors to trade stocks and other financial instruments online.
- Digital Wealth Management: companies offer personalized financial planning and investment solutions through digital channels.

1.5 State Bank of India (SBI):

State bank of India is India largest public sector bank, its headquarter is located in Mumbai. SBI is Indian Multinational public sector bank and financial service. Challa

Sreenivasulu Setty also known as C.S Setty is an Indian banker and current chairmain of State Bank of India and current CFO(Chief Financial Officer) of SBI is Kameshwar Rao Kodavanti. Its parent is government of India (57.54%) and subsidiaries are SBI Life Insurance Ltd., SBI Mutual fund (63%), SBI Card and payment services Ltd. (68.63%), SBI General Insurance (69.11%). SBI is the biggest bank and financial services company of India through extensive network of more than 22,500 branches, 63,580 ATMs and 82,900 BC outlet, we provide service to more than 50 crore customers. Banks has effectively diversified its business operations. SBI keep redefining banking in India with goal of providing sustainable and ethical banking solutions.

HISTORY of SBI

The origins of State bank of India date back to 1806 when the Bank of Calcutta (later called the Bank of Bengal) was established. In 1921, the Bank of Bengal and two other banks (Bank of Madras and Bank of Bombay) were amalgamated to form the Imperial Bank of India. In 1955, the Reserve Bank of India acquired the controlling interest of the Imperial Bank of India and SBI was created by an act of Parliament to Succeed the Imperial Bank of India. The Imperial Bank of India changed its name to State Bank of India on July 1, 1955. Since the RBI's interest in SBI in 2008 in order to eliminate any potential conflict of interest. [4]

MISSION:- To be the preferred bank for all stakeholders by providing innovative financial product and services.

VISSION:- To be the most trusted and admired financial institution globally, recognized for excellence in customer service and sustainable business practices.

VALUE:

- Service|
- Transparency
- Ethics
- Responsibility
- Politeness

- Sustainability

1.6 HDFC Bank :

HDFC stands for Housing Development Finance Corporation. HDFC Bank is one of the India's leading private banks and was among the first to receive approval from the Reserve bank of India (RBI) to set up a private sector bank in 1994.

As of December 31,2014 , the Bank's distribution network was at 9,143 branches and 21,049 ATMs across 4,101 cities/ towns as against 8,091 branches and 20,688 ATMs across 3,872 cities/ towns as of December 31,2023. 51% of our branches are in semi urban and rural areas.

The bank's international operations comprises four branches in Hong Kong, Bahrain, Dubai and IFSC Banking Unit (IBU) in Gujarat International Finance Tech City. It has five representative offices in Kenya, Abu Dhabi, Dubai, London and Singapore. The Singapore and London offices were representative offices or erstwhile HDFC Limited and become representative offices of Bank post the merger. These are for providing loans- related services for availing housing loans in India and for the purchase of properties in India.

1.7 HISTORY OF HDFC BANK:

HDFC Ltd. Was founded in 1977, when the late Shri. HT Parekh, founder and Chairman of HDFC Ltd. Dreamt of millions of middle-class citizen of India Owning a home and not having to wait till their retirement. Pioneering India's housing finance industry, the late Shri. Parekh, a Padma Bhushan recipient, built HDFC Ltd. On a strong foundation of integrity, transparency, and professionalism. Taking the legacy further Mr. Deepak Parekh, chairman HDFC Ltd. And a Padma Bhushan awardee, not only made HDFC the leader in mortgages, but also transformed it into India's leading Financial Services conglomerate with a presence in Banking, Asset Management, Life insurance, General insurance, Real Estate Venture fund, Education Loans and Education.[5]

Mission & value :

- Excellence
- Customer focus
- Product leadership
- People
- Sustainability

2. LITERATURE REVIEW

Xavier Vives(2016)[6]: In his article 'The impact of fin-tech on Banking' shows that influence in fin-tech is beginning to be felt in the banking sector and capital market . This article study the development and impact of fin-tech on efficiency, banking, market structure and financial stability. It shows fin-tech has a large and potentially welfare-enhancing disruptive capability. However, new technology to deliver the benefits for consumers and firm without endangering financial stability.

Renu Singh , Garima Malik, Vipin Jain(2017)[7]: In their article 'Fin-tech effect measuring impact of fin-tech adoption on banks profitability' aims to understand the impact of financial technology implementation on the profitability of Indians banks. The study considered return on assets (ROAs) and return on equity (ROE) as dependent variables and independent variables include number of ATMs to bank branches, fin-tech dummy. This study shows positive impact of fin-tech adoption on banks profitability.

Vinay kandpal & Rajat Mehrotra (2019)[8]: In their study 'financial inclusion: the role of fin-tech and digital financial services in India' shows cashless transaction system is achieving its growth day by day. The market become globalized and the development of banking sector, the people move from cash to cashless system traditional banking organization are now trying to make in roads into rural India by launching innovative mobile based banking solutions, with support from the government, large technology companies and using new ways of reaching out to the rural masses and educate them about the various financial product.

Sana Arz Bhutto, Yasir Jamal, Saif Ullah(2023)[9]: In their article 'fin-tech adoption, HR competency potential, service innovation and firm growth in banking sector'. This study investigate the role of service innovation as a mediator between fin-tech adoption and firm growth also explorer the role of human resource competency in fin-tech adoption. This study shows that adoption of fin-tech has positively impact on the firm growth. The findings confirmed the influence of human resource competencies on fin-tech adoption in bank. Employee performance can be optimized to impact service innovation and business growth, which promotes the adoption of fin-tech.

Kavitha lal, M. Suvarchala Rani, P. Rajini(2020)[10]: In their paper 'factors that influence the customer adoption of fin-tech in Hyderabad, India' discuss the factor which influence the fin-tech adoption and its impact on the usage among bank customers. This study has identified three main factor i.e, conducive, adoptability and security which influence the usage of fin-tech, the most enabling factors being conducive. It find that customer would like to perform bank transactions conveniently in a span of time without approaching bank personally and confident about the services provided by the bank. Younger generation is not much concerned about the security issues related to fin-tech. overall, these finding may be considered to facilitate adding to the exiting contribution on the influence of fin-tech on the customers.

Girish kumar painoli, D Paul Dhinakaran, C Vijai (2021)[11]: In their study 'Impact of fin-tech on the profitability of public and private bank in India' shows that fin-tech provide alternative solution to banking service and non- banking financial services. Fin-tech is an emerging concept in financial industry. The main purpose of this study is to find out the impact of fin-tech on the profitability of public and private sector banks in India. This study explain the evolution of the fin-tech industry and present fin-tech industry in Indian banking sector, this paper provide historical evaluation of fin-tech and market size and growth. The fin-tech service in India is fastest growing around the world. Fin-tech services are going to change the habits and behaviour of the Indian finance sector.

C Vijai (2019)[12]: The main purpose of this paper is to find out the opportunity and challenges in the fin-tech industry. The fin-tech provide digitalization transaction and more secure for the user. The benefits of fin-tech service reducing operation costs and friendly

users. The fin-tech services in India is fastest growing in the world. The fin-tech services are going to change the habits and behaviour of the Indian finance sector.

Heeks(2018)[13]: This paper discussed the critical role of digital infrastructure in the adoption and success of fin-tech practice areas. His work emphasized that without reliable internet and mobile connectivity, the benefits of fin-tech cannot be fully realized. Heeks called for increased investment in digital infrastructure to ensure that populations can access and utilize fin-tech services effectively.

3. RESEARCH GAP :

After viewing some research articles and journal, I found that there is a need to study and explore the topic adoption of fin-tech in banking sector in Ranchi district with special reference to SBI & HDFC Bank. This research will help to find out the role of fin-tech in promoting financial inclusion in Ranchi district, particularly in the context of SBI & HDFC Bank,

4. SIGNIFICANCE OF STUDY:

The study help to find out the adoption of fin-tech in banking sector in Ranchi district. Examine the impact of fin-tech on the profitability of private and public sector banks, including the effect on customer satisfaction, operational efficiency and financial performance. The study help to find out how fin-tech improve banking service in Ranchi district, making them more convenient, efficient and customer- centric. This study provide a frame work to future researcher so they can study the impact of fin-tech on banking service and customer satisfaction, which can be applied to other banks and financial institution.

The study will provide insight on how fin-tech can be used to enhance customer experience and satisfaction in banking services.

5. OBJECTIVES OF STUDY:

1. To examine the impact of fin-tech adoption on banking services offered by SBI & HDFC Bank in Ranchi district.

2. To explore the fin-tech adoption strategies and initiatives of SBI &HDFC Bank in Ranchi district.

3. To identify the challenges and opportunities faced by SBI & HDFC Bank in adopting fin-tech in Ranchi district.

4. To examine the role of fin-tech in promoting financial inclusion in Ranchi district.

5. To explore the use of AI(Artificial Intelligence), block chain and other internet things in banking sector.

6. To identify the most preferred fin-tech services among sthe bank customer and understand the reason behind their preference.

6..RESEARCH QUESTION:

1. How has the adoption of fin-tech impacted the banking services offered by SBI & HDFC Bank in Ranchi district?

2. Does the adoption of fin-tech cause an increase in customer satisfaction with the banking service offered by SBI & HDFC Bank in Ranchi district?

3. What are the differences and similarities in the fin-tech adoption experience of SBI & HDFC Bank in Ranchi district?

4. Does the adoption of fin-tech cause an improvement in the banking services offered by SBI & HDFC Bank in Ranchi district?

7. HYPOTHESIS OF THE STUDY:

1. $H0_{1:}$ The adoption of fin-tech has no significant impact on the financial performance of SBI & HDFC Bank.

   $H1_{1:}$ The adoption of fin-tech has significant impact on the financial performance of SBI &HDFC Bank.

2. $H0_{2:}$ There is no significant difference in customer adoption of fin-tech service offered by SBI & HDFC Bank.

   $H1_{2:}$ There is a significant difference in customer adoption of fin-tech service offered by SBI & HDFC Bank.

8. RESEARCH METHODOLOGY:

Data collection

Primary data collection

1. Survey questionnaire will be conducted froms employee of SBI & HDFC Bank to gather their experience and perceptions with fin-tech adoption.

2. In- depth interview with the senior executive of SBI & HDFC Bank to gather more detailed information on the bank's fin-tech adoption.

Secondary data collection

1. Annual report of SBI & HDFC Bank to gather information on their financial performance and fin-tech adoption.
2. Research studies and academic paper
3. Online website and data base

Sample size-

200: 100 from SBI employees and 100 from HDFC Bank employees.

- Sampling technique- the sampling technique is used will be stratified random sampling.
- Sample selection- the sample will be selected from the employee of SBI &HDFC Bank.

Data analysis Tools

- SPSS for quantitative and qualitative data analysis, including descriptive and inferential statistics
- MS Excel for data organization and visualization.

Data analysis method

1. Descriptive statistics:- use descriptive statistics to summarize and describe the data.
2. Inferential statistics:- use inferential statistics to test hypotheses and make inference .

Different mathematical tools and statistical tools are used to find out the objective of the study. Mathematical tools like- percentage and average is used and statistical tools like- mean, chi-square, regression, correlation f-test etc. will be used to find the objective

9. LIMITATION OF STUDY:

- The study is limited to Ranchi district, which may not be representative of the entire country or other regions.
- The study focuses on only two banks (SBI & HDFC Bank) which may not provide a complete understanding of the fin-tech adoption phenomenon in banking.
- The finding of the study may not be generalizable to other banks or region.
- The study sampling frame may not be representative of the population, which can impact the validity of the finding.

- The fin-tech landscape is rapidly changing, which can make it challenging to conduct a comprehensive study.

10. TENTATIVE CHAPTERIZATION:

Chapter1: Introduction brief profile of SBI & HDFC Banks and review of literature.

Chapter2: Overview of adoption of fin-tech in banking sector

Chapter3: Financial performance evaluation of SBI & HDFC Bank

Chapter4: Research methodology, Analysis of data and Hypothesis testings

Chapter5: Conclusion, findings and suggestion

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(**Dr. Anirban Gupta)** **(Megha Kumari)**

Supervisor Research Scholar

Assistant Professor

Department of Commerce

St. Xavier's College, Ranchi